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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 United States Special Operations Command **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY

0400: *Research, Development, Test & Evaluation, Defense-Wide*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 1160421BB: *Special Operations CV-22 Development*

COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	13.976	10.775	1.822	-	1.822	0.911	0.182	-	-	0.000	27.666
SF200: SO CV-22	13.976	10.775	1.822	-	1.822	0.911	0.182	-	-	0.000	27.666

A. Mission Description and Budget Item Justification

The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical medium lift, multi-mission aircraft. The CV-22 will provide long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment was completed in FY 2007, and the Block 20 increment started in FY 2008.

Block 10: Integrate and test Directional Infrared Countermeasures, a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness Station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration, exfiltration, and resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, more robust performance in situational awareness, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Design and Development started in FY 2008. FY 2011 RDT&E activities continued on Block 20 Increment 1 and 2, including Terrain Following Logic, Terrain Following less than 50 knots, Multi Mission Advanced Tactical Terminal, and Improved Crew Interface of Integrated Broadcast Service Data. Block 20 Increment 3 efforts were also initiated in FY2011, including Helmet Mounted Display and Digital Map Upgrade. FY 2012 RDT&E activities continue and complete on Block 20 Increment 1, 2 & 3 efforts. FY 2013 RDT&E activities continue on improvements to the Enhanced Situational Awareness package providing enhanced, correlated, fusion and display, threat response, training and simulation capabilities.

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 1160421BB: <i>Special Operations CV-22 Development</i>
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B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	14.406	10.775	-	-	-
Current President's Budget	13.976	10.775	1.822	-	1.822
Total Adjustments	-0.430	-	1.822	-	1.822
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.357	-			
• Other Adjustments	-0.073	-	1.822	-	1.822

Change Summary Explanation

Funding:

FY 2011: Decrease of -\$0.357 million is due to Small Business Innovative Research transfer and economic assumption reduction of -\$0.073 million.

FY 2012: None.

FY 2013: Net increase of \$1.822 million is due to an increase of \$1.800 million to continue Enhanced Situational Awareness development efforts and economic assumption increase of \$0.022 million.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 United States Special Operations Command									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 1160421BB: Special Operations CV-22 Development				PROJECT SF200: SO CV-22			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
SF200: SO CV-22	13.976	10.775	1.822	-	1.822	0.911	0.182	-	-	0.000	27.666
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
A. Mission Description and Budget Item Justification: The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical medium lift, multi-mission aircraft. The CV-22 will provide long range, high speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments supported with rapid prototyping. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment completed in FY 2007, and the Block 20 increment started in FY 2008.											
Block 10: Integrate and test Directional Infrared Countermeasures, a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness Station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration, exfiltration, and resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.											
Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, robust performance in situational awareness, weapons, avionics, survivability, maneuverability, mission deployment, improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Development and Demonstration started in FY 2008. FY 2011 RDT&E activities continue on Block 20, initiating Block 20 Increment 3 and continuing Increment 1 and 2 efforts. FY 2012 RDT&E activities continue on Block 20 Increment 1, 2 and 3 efforts. FY 2013 RDT&E activities continue on improvements to the Enhanced Situational Awareness package providing enhanced, correlated, fusion and display, threat response, training and simulation capabilities.											
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2011	FY 2012	FY 2013	
Title: CV-22 Aircraft Block 20								13.976	10.775	1.822	
FY 2011 Accomplishments: Continued flight test support and design and development of Block 20.											
FY 2012 Plans: Continues flight test support and design and development of Block 20.											
FY 2013 Plans:											

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B. Accomplishments/Planned Programs (\$ in Millions)										FY 2011	FY 2012	FY 2013
Continue Enhanced Situational Awareness development providing enhanced, correlated, fusion and display, threat response, training and simulation capabilities.												
Accomplishments/Planned Programs Subtotals										13.976	10.775	1.822
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost	
• PROC1: CV-22 SOF MOD	138.350	133.002	139.147		139.147	98.927	19.843	6.491	6.607	Continuing	Continuing	
• PROC2/0401318F: <i>Aircraft Procurement Air Force</i>	597.881	431.332	423.475		423.475	319.598	106.152	71.958	72.007	194.510	5,558.792	
• RDT&E1/0401318F: <i>RDT&E, USAF</i>	17.648	13.223	28.027		28.027	25.438	21.223	14.656	14.484	20.399	479.852	
• RDT&E/0604262N: <i>V-22 RDT&E, N BA-05</i>	42.686	84.477	54.436		54.436	40.316	54.929	51.217	52.292	111.055	9,397.300	
D. Acquisition Strategy												
The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIRSYSCOM PMA-275). This ensures that the CV-22 changes are incorporated into the ongoing V-22 production line with minimum impact. Funding for the baseline CV-22 Engineering Manufacturing and Development, known as Block 0, is embedded in the Navy budget. Block 10 RDT&E funding was sent from USSOCOM to NAVAIRSYSCOM to be placed on contract with the V-22 prime contractor. Block 10 capability is required for compliance with the Joint Operational Requirements Document and associated Milestone III Capabilities Production Document. Block 20 and subsequent block upgrades are planned to follow the same acquisition strategy, with NAVAIRSYSCOM PMA-275 ensuring the integration of SOF-unique systems with the ongoing basic vehicle improvements supporting both the CV-22 and the Marine Corps MV 22.												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 United States Special Operations Command											DATE: February 2012		
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Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration, Assembly, Test and Checkout (Block 20)	SS/CPFF	Bell-Boeing:Amarillo, TX	52.687	7.995	Dec 2011	-		-		-	0.000	60.682	
Systems Engineering	SS/CPFF	Raytheon:Indianapolis, IN	5.465	-		-		-		-	0.000	5.465	
Enhanced Situational Awareness	SS/TBD	TBD:TBD	-	-		1.822	Feb 2013	-		1.822	Continuing	Continuing	
Prior Year Funding - Completed Efforts	SS/Various	Various:Various	389.472	-		-		-		-	0.000	389.472	
Subtotal			447.624	7.995		1.822		-		1.822			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Test and Evaluation (Block 20)	SS/Various	Bell-Boeing; 413FLTS:Amarillo, TX; Hurlburt Field, FL	8.506	1.795	Nov 2011	-		-		-	0.000	10.301	
System Test and Evaluation (ATA)	SS/Various	Bell-Boeing; DynCorp:Amarillo, TX; Fort Worth, TX	13.241	0.985	Dec 2011	-		-		-	0.000	14.226	
Prior Year Funding - Completed Efforts	SS/Various	Various:Various	43.584	-		-		-		-	0.000	43.584	
Subtotal			65.331	2.780		-		-		-	0.000	68.111	

			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			512.955	10.775		1.822		-		1.822			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 United States Special Operations Command	DATE: February 2012
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CV-22																												
CV-22 Block 20 Development/Test																												
CV-22 Aircraft Deliveries (PROC)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 United States Special Operations Command			DATE: February 2012
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CV-22				
CV-22 Block 20 Development/Test	1	2011	4	2015
CV-22 Aircraft Deliveries (PROC)	1	2011	4	2016

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